TUFF GUNTRY	Installation manual 2" Front leveling kit 2009 - 2012 Ford F150 4WD and 2WD
EZ - Ride Suspension	Part # 22909 sj07112012rev.05
Part # 22909     2009 - 2012 Ford F150 4WD and 2WD     2" front leveling kit     Part #   Description   Qty.     22909-01   Front leveling spacer   2     D2P-NB   Hardware bag   1     22909INST   Instruction manual   2     MIRRORHANCER   Rear view mirror hanger   1     WARNINGDECAL   Warning decal   1     Congratulations on your selection to purchase a Tuff   Country EZ-Ride Suspension are proud to offer a high     quality product at the industries most competitive pric-   ing. Thank you for your confidence in us and our product.     If you desire to return your vehicle to stock, it is the   customers responsibility to save all stock hardware.     The Tuff Country EZ-Ride Suspension product safety   label that is included in your kit box must be installed     inside the cab in plain view of all occupants.   Please see the end of the installation manual for a picture of the hard parts that are included in this suspension system.     Tuff Country EZ-Ride Suspension packages (2) sets of   instruction sheets with this box kit. (1) is for the installer and (1) is for the customer. The (1) for the customer has some post installation procedure literature and it is the installers responsibility to make sure that the customer receives a copy of the installation manual al along with the literature.	Important customer information: Tuff Country EZ-Ride Suspension highly recommends that a qualified or a certified mechanic performs this installation. It is the responsibility of the customer/installer to wear safety glasses at all times when performing this instal- lation. It is the customers/installers responsibility to read and understand all steps before installation begins. If you have any questions or concerns, please contact our technical department @ (801) 280-2777. Also, the OEM manual should be used as a reference guide. This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road per- formance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. DRIVE SAFELY! Avoid abrupt maneuvers: such as sudden sharp turns which could cause a roll over, resulting in serious injury or death. It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use. After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspen- sion maintenance.

Please follow instructions carefully:

Before installation begins, measure from the center of senger side. the hub, to the bottom of the fender well, and record measurements below.

Pre-installation measurements:

Driver side front:\_\_\_\_\_ Passenger side front:\_\_\_\_\_

At the end of the installation take the same measurements and compare to the pre-installation measurements.

Post-installation measurements:

Driver side front:\_\_\_\_\_ T Passenger side front:\_\_\_\_\_ r

If the vehicle that you are working on is equipped with EPAS. The EPAS plugs will need to be disconnected prior to beginning the installation of this kit. Failure to disconnect these plugs could result in damage to the EPAS module resulting in an error message being displayed, which will require replacement of the EPAS module. EPAS stands for (Electronic Power Assist Steering)

1. To begin installation, block the rear tires of the vehicle so

that the vehicle is stable and can't roll backwards. Safely lift 6. Working on the driver side, disconnect the sway bar end the front of the vehicle and support the vehicle with a pair of jack stands. Place a jack stand on both the driver and the passenger side. Next, remove the front wheels and tires from both sides.

 Working on the driver side, remove the (3) upper strut mount nuts. Save the stock hardware. Repeat procedure on the passenger side.



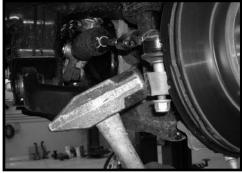
3. Working on the driver side, Loosen, but do not remove the upper ball joint nut. Repeat procedure on the passenger side.



 Working on the driver side, loosen but do not remove the nut from the outer tie rod. Repeat procedure on the passenger side.



5. Now return to the upper ball joint and outer tie rod and carefully break the taper and remove them both from the steering knuckle. Repeat on passenger side. **Special Note:** Take special care not to damage the ball joint and tie rod end rubber boots.



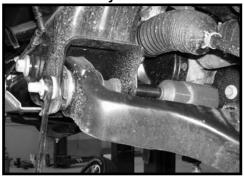


 Working on the driver side, remove the nut and bolt holding the strut assembly to the lower control arm. Repeat on passenger side.



Working on the driver side, loosen but do not remove the
bolts holding the lower control arm to the vehicle. Repeat

on passenger side. Special note: This is done so that the down on the upper control arm to get the nut started. Torque lower control arm can swing down and allow you to to 85 ft lbs and repeat on passenger side. remove the strut assembly from the vehicle.



With both strut assemblies out of the vehicle it is time to install the new leveling spacers. Install these directly on top of the stock strut cap and secure them using the stock nuts. 15. Working on the driver side re-install the tie rod ends back Torque to 35 ft lbs.



Now attach the brake line bracket into the stock location using the stock bolt, torque to 8 ft lbs.



into the steering knuckle using the stock nut and torque to 70 ft lbs. Repeat on passenger side.

16. Working on the driver side, attach the sway bar back to the sway bar end link using the stock hardware. Repeat on passenger side and torque to 50 ft lbs.

If the vehicle that you are working on is equipped with EPAS, and you disconnected the module, re-connect the module at this point! EPAS stands for (Electronic Power Assist Steering)

10. Now it is time to install the modified strut into the vehicle, 17. Install the tires and wheels and carefully lower the vehibut first, in order to make enough room to get the strut into cle to the ground. place, it will be necessary to remove the CV axle nut and

also unbolt the brake line bracket from the frame rail to gain 18. With the weight of the vehicle on the ground, move back enough slack. and torque the driver and passenger side lower control arm



11. Working on the driver side, install the strut assembly sure that a re-torque is performed on all hardware associated back into the stock location, it may be necessary to pry down with this suspension system after the first 100 miles of instalon the lower control arm in order for the lower eyelet of the lation. It is also the customers responsibility to do a complete shock to go into its pocket. Secure the strut using the stock bolt and hardware on the lower part, and using the new 3/8 nylon lock nuts and 5/16" flat washers on the upper mount. Torque the upper 3/8" hardware to 32 ft lbs and the lower stock bolt to **100 ft lbs.** Repeat on passenger side.

12. With the struts now installed back into the vehicle, it is the customer. The (1) for the customer has some post installatime to re-install the CV axle back into the hub assemble and secure using the stock nut. Torque to 20 ft Ibs. Repeat on to make sure that the customer receives a copy of the instalpassenger side.

hardware to 110 ft lbs.

## Congratulations, installation complete!

Special note: After the completion of the installation. Tuff Country EZ-Ride Suspension recommends taking the vehicle to an alignment shop and having a proper front end alignment performed.

Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customers responsibility to make

re-torque after every 3000 miles or after every off road use. Neglect of following these steps could cause brackets to come loose and cause serious damage to the suspension system and to the vehicle.

Tuff Country EZ-Ride Suspension packages (2) sets of instruction sheets with this box kit. (1) is for the installer and (1) is for tion procedure literature and it is the installers responsibility lation manual along with the literature.

If you have any questions or concerns, please feel free to con-13. Re-connect the upper ball joint into the steering knuckle tact Tuff Country or your local Tuff Country dealer. and secure using the stock nut. It may be necessary to pry